



Science Toolkit: Grade 7 Objective 3.C.1.a

Student Handout: Science: Grade 7 Objective 3.C.1.a

Standard 3.0 Life Science

Topic C. Genetics

Indicator 1. Explain the ways that genetic information is passed from parent to offspring in different organisms.

Objective a. Investigate and explain that in some kinds of organisms, all the genes come from a single parent, whereas in organisms that have sexes, typically half of the genes come from each parent.

Selected Response (SR) Item

Question

Use the information below to answer the following question.

Pine trees are vascular plants. There are more than 100 species of pine trees. The loblolly pine is native to Maryland and is found in forests near the Chesapeake Bay. This tree grows rapidly. An interesting feature of the loblolly pine tree is the presence of both male and female structures on one tree. The loblolly pine is a member of a group of cone-bearing plants called conifers. These plants do not produce flowers. The conifers slowly separated from a group of flowering plants approximately 100,000,000 years ago.

Loblolly pine trees usually reproduce sexually when pollen from a male structure fertilizes a female structure on a different tree.

What percentage of genetic information is contributed by the pollen of the male structure?

- A. 25%
- B. 50%
- C. 75%
- D. 100%

Correct Answer

- B. 50%

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